# Final
# Site-Specific Safety and Health Plan Attachment
# For Range 4A Fog Oil Storage Area
# Pelham Range, Parcel 123(6)
# Fort McClellan
# Calhoun County, Alabama
# EPA ID No. AL7 210 020 562

**Prepared for:**

**U.S. Army Corps of Engineers, Mobile District**
**109 St. Joseph Street**
**Mobile, Alabama 36602**

**Prepared by:**

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**312 Directors Drive**
**Knoxville, Tennessee 37923**

**Delivery Order CK05**
**Contract No. DACA21-96-D-0018**
**IT Project No. 774645**

**March 2001**

**Revision 1**

The following Safety and Health Plan (SHP) has been designed for the methods presently contemplated by IT Corporation (IT) for execution of the proposed work. Therefore, the SHP may not be appropriate if the work is not performed by or using the methods presently contemplated by IT.

In addition, as the work is performed, conditions different from those anticipated may be encountered and the SHP may have to be modified. Therefore, IT only makes representations or warranties as to the adequacy of the SHP for currently anticipated activities and conditions.

# Site-Specific Safety and Health Plan Attachment Approval
# Fort McClellan, Calhoun County, Alabama

I have read and approve this site-specific safety and health plan attachment for the Range 4A Fog Oil Storage Area, Pelham Range, Parcel 123(6), at Fort McClellan, Alabama, with respect to project hazards, regulatory requirements, and IT Corporation procedures.

_____

Jeanne Yacoub, PE — Date
Project Manager

_____

William J. Hetrick, CIH — Date
Health & Safety Manager

## *Acknowledgements*

The final approved version of this site-specific safety and health plan (SSHP) attachment for the Range 4A Fog Oil Storage Area, Pelham Range, Parcel 123(6), has been provided to the site coordinator. I acknowledge my responsibility to provide the site coordinator with the equipment, materials, and qualified personnel to implement fully all safety requirements in this SSHP attachment. I will formally review this plan with the health and safety staff every 6 months until project completion.

_____ _____

Project Manager Date

I acknowledge receipt of this SSHP attachment from the project manager, and that it is my responsibility to explain its contents to all site personnel and cause these requirements to be fully implemented. Any change in conditions, scope of work, or other change that might affect worker safety requires me to notify the project manager and the health and safety manager.

_____ _____

Site Coordinator Date

# Site-Specific Safety and Health Plan
# Acknowledgement Form

I have been informed of, and will abide by the procedures set forth in, this site-specific safety and health plan attachment for the activities for the Range 4A Fog Oil Storage Area, Pelham Range, Parcel 123(6), at Fort McClellan, Calhoun County, Alabama.

| ***Printed Name*** | ***Signature*** | ***Representing*** | ***Date*** |
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# Fort McClellan Gate Hours

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|---|---|
| Baltzell Gate | Baltzell Road.<br>Open 24 hours daily, 7 days a week. |

# Pelham Range Access Requirements

| | |
|---|---|
| Pelham Range | IT personnel will contact the Range Control Office **each day** access is required to receive an access permit and available areas of entry. **See Attachment 1 for Range Control contact for Pelham Range.** |

# Fort McClellan Project Emergency Contacts

| | |
|---|---|
| Range Control Office (Main Post) | (256) 848-6772 |
| Fire Department (on post) | 911 |
| Fire Department (off post) | (256) 237-3541 |
| Ambulance (off post) | 911 |
| Regional Medical Center | (256) 235-5121 |
| Military Police (SSG Busch) | (256) 848-5680, 848-4824 |
| DOD Guard Force (Mr. Bolton) | (256) 848-5680, 848-4732 |
| Anniston Police Department | (256) 238-1800 |
| Chemical Agent Emergencies | (256) 895-1598 |
| (Ken Barnett, CEHNC) | cell phone (256) 310-0604 |
| UXO Emergencies | (256) 895-1598 |
| (Ken Barnett, CEHNC) | cell phone (256) 310-0604 |
| UXO Nonemergencies/Reporting Only (Ronald Levy) | (256) 848-3758 |
| Baltzell Gate Guard Shack | (256) 848-5693, 848-3821 |
| National Response Center & Terrorist Hotline | (800) 424-8802 |
| Poison Control Center | (800) 462-0800 |
| EPA Region IV | (404) 562-8725 |
| Ronald Levy, Chief, FTMC Environmental Management | (256) 848-3758 |
| Ellis Pope, U.S. Army Corps of Engineers | (334) 690-3077 |
| Jeanne Yacoub, IT Project Manager | (770) 663-1429 |
| Bill Hetrick, IT H&S Manager | (865) 690-3211, pager (888) 655-9529 |
| Mike Moore, Fort McClellan Safety Officer | (256) 848-5433 |
| Dr. Jerry Berke, IT Occupational Physician | (800) 350-4511 |

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## List of Tables



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## *List of Acronyms*

See Attachment 1, List of Abbreviations and Acronyms, of the Field Sampling Plan Attachment contained in this binder.

# *1.0 Site Work Plan Summary*

***Project Objective.*** The objective of this investigation at Fort McClellan (FTMC), Calhoun County, Alabama is to collect and analyze soil and water at the Range 4 Fog Oil Storage Area, Pelham Range, Parcel 123(6).

### *Project Tasks*

- Conduct a surface and near surface unexploded ordnance (UXO) survey over all areas to be included in the sampling effort.
- Provide downhole UXO support for all intrusive drilling activity to determine the presence of potential downhole hazards.
- Conduct utility clearances after the UXO surface survey prior to any intrusive sampling.
- Install groundwater monitoring wells.
- Collect surface soil samples, subsurface soil samples, groundwater samples, and depositional soil samples.

***Personnel Requirements.*** Up to 15 employees. See Figure 1-1 for an organization chart.

Note: All personnel on this site shall have received training, informational programs, and medical surveillance as outlined in the installation-wide safety and health plan (SHP) for site investigations at FTMC, and be familiar with the requirements of this site-specific SHP. This site-specific safety and health plan must be used in conjunction with the SHP, FTMC, Alabama.

# 2.0 Site Characterization and Analysis

## 2.1 Anticipated Hazards

The tasks which will be conducted in which an activity hazard analysis has been completed are:

- Equipment setup and field mobilization
- Land survey including UXO surface/near surface survey
- Surface soil, subsurface soil, and depositional soil sampling
- Installation of monitoring wells including downhole UXO support.

Historical data indicate that the fog oil, prior to 1986, was greater than 50 percent polyaromatic hydrocarbons. In the absence of a specific material safety data sheet, the potential chemicals of concern listed in Table 2-1 are benzene, toluene, ethylbenzene, and xylene compounds and diesel oil. There are no known or suspected particulate contaminants.

The possibility of UXO exists at Range 4A; therefore, UXO surface sweeps and downhole surveys of soil borings will be required to support field activities. UXO safety will be achieved by employing UXO specialists to ensure that field personnel do not come into contact with UXO. In areas where UXO is suspected to exist, including new and existing well locations, the UXO specialists will observe UXO avoidance operations.

## 2.2 Site Description

Range 4A Fog Oil Storage Area, Parcel 123(6), is located in north central Pelham Range and is due west of Range 56 in Training Area 4A of Pelham Range. The area has been designed for storage of fog oil used to generate smoke for training exercises at FTMC and Pelham Range, and is believed to have been in use since at least 1964. The storage capacity at Range 4A Fog Oil Storage Area, Parcel 123(6), is 75,000 gallons. The Fog Oil Storage Area is constructed with two concrete structures: a 15 foot by 15 foot drum handling area, and a 60 foot by 60 foot loading and storage area. Both the drum handling area and loading and storage area are located inside a fenced-in area. Each concrete structure is equipped with drains connected to an oil/water separator (OWS) and an underground storage tank. The drains are designed to collect spilled oil and precipitation. The facility covers an area of less than 1 acre.

The 60 foot by 60 foot loading and storage area at Range 4A Fog Oil Storage Area is sloped and designed to divert spilled oil and precipitation to a floor drain, which is connected to the OWS. Seams once present in the concrete pad have been sealed. The seams were once reported leaking

and eventually led to seepage of fog oil onto the ground beneath the pad.

The original configuration of the loading and storage area at Range 4A Fog Oil Storage Area was an earthen bermed area with drums of fog oil stored on bare soil within the berms prior to the renovation and the current use of concrete. The surface soil is reported as stained with oil from the storage and handling activities. The loading and storage area is designed to store approximately 75,000 gallons of fog oil. However, in 1986, quantities larger than 75,000 gallons were observed. The once earthen-bottomed loading and storage area has been modified to the current 60-foot by 60-foot concrete pad, and elevated containment areas.

The drum handling area, located north of the loading and storage area and within the fenced area, is a 15 foot by 15 foot, 2 foot deep pit covered with a metal grate, and is plumbed into the OWS via underground piping. Design drawings required for the renovation of Range 4A Fog Oil Storage Area indicate that the drum handling area was originally a sand pit prior to the renovation and current use of concrete. Oil spills were observed at the staging area that includes the soils outside of the drum staging area. The soils outside of the original drum staging area were noticeably stained.

Drums, historically, were stored horizontally in the elevated containment areas. Approximately 150 30-gallon drums were stored at the facility in June 1999, but were to be removed from the facility by October 1, 1999 due to the closure of FTMC (CHPPM, 1999). Three 30-gallon drums were found half-full during a site inspection conducted by IT on November 6, 2000. In addition to fog oil, clean rags, used rags, dry sweep, and minor amounts of fuel were stored at Range 4A Fog Oil Storage Area.

Physical features of Range 4A Fog Oil Storage Area includes an unnamed tributary to Cane Creek approximately 1,000 feet to the east of the site. The stream originates north of the site, and flows from north to south. Range 4A is positioned in a low-lying area of approximately 600 feet in elevation.

Range 4A Fog Oil Storage Area, Parcel 123(6), is comprised of a concrete pad approximately 360 square feet in size (60 feet by 60 feet), and a drum handling area approximately 15 feet by 15 feet, an oil/water separator, and waste oil UST. The entire area used for the handling and storage of fog oil drums is fenced.
The original configuration of the storage area was a bermed area with drums of fog oil stored on bare soil within the berm. The surface soil was stained with oil from the storage and handling

activities. The earthen-bottomed storage area has been modified and is currently a 60 feet by 60 feet concrete pad surrounded by a 5-foot high concrete berm, and elevated containment areas. A locked chainlink fence surrounds the Fog Oil Storage Area.

## 3.0 Personal Protective Equipment

The work activities will begin in the following levels of protection. Also, a completed description of Level D, Modified Level D, and Level C personal protective equipment (PPE) is provided.

| Task | Initial Level of PPE |
|---|---|
| Staging equipment | Level D |
| Conducting UXO surface surveys | Level D** |
| Drilling and groundwater well installation | Modified Level D* |
| Soil boring sampling | Modified Level D* |
| Collecting surface water samples | Modified Level D* |
| Equipment Decontamination | Modified Level D* |

* Initial level will be raised to level C or higher if air monitoring results in the worker's breathing zone are greater than action levels.

** Personnel conducting UXO surveys must wear nonconductive work boots. Where overhead hazards exist, a chin strap will be worn with hard hats to prevent accidental falling of the hard hat.

***Level D.*** The minimal level of protection that will be required of IT Corporation personnel at the site will be Level D. The following equipment will be used for Level D protection:

- Coveralls or work clothing
- Leather work gloves (when necessary)
- Steel-toed safety boots
- Safety glasses
- Full face shield when there is a potential for flying projectile or splash hazards
- Hard hat
- Hearing protection (when working near/adjacent to operating equipment).

***Modified Level D.*** The following equipment will be used for Level D-Modified protection:

- Tyvek coveralls when handling dry contaminants (i.e. collecting soil borings)
- Poly-coated Tyvek when handling liquid contaminants (i.e., water samples, decontamination)
- Latex boot covers
- Nitrile, or latex inner gloves; leather work gloves (outer) when necessary
- Steel-toed safety boots
- Safety glasses

- Hard hat
- Hearing protection (when working near/adjacent to operating equipment).

Note: In addition to modified Level D PPE, the operator of high-pressure water jetting equipment shall wear metatarsal guards for the legs and feet, and a face shield.

***Level C.*** Level C protection will not be used unless air-monitoring data indicate the need for upgrade; however, the equipment shall be readily available on site. The following equipment will be used for Level C protection:

X National Institute of Occupational Safety and Health-approved full-face, air-purifying respirators equipped with organic vapor/acid gas/P100 cartridge

X Hooded, Saran-coated Tyvek, taped at gloves, boots, and respirator

X Nitrile gloves (outer); wear leather work gloves (outer) when necessary

X Latex or lightweight nitrile gloves (inner)

X Neoprene steel-toed boots or steel-toed safety boots with polyvinyl chloride over booties

X Hard hat

X Hearing protection (when working near/adjacent to operating equipment).

Note: In addition to Level C PPE, the operator of high-pressure water jetting equipment shall wear metatarsal guards for the legs and feet, and a face shield.

# 4.0 Site Monitoring

Potential environmental contaminants of concern resulting from Range 4A operations are benzene, toluene, ethylbenzene, and xylene compounds and residual fuel oil. Table 4-1 contains action levels for site monitoring at the sites.

***Chemical.*** Monitoring will be performed by the site safety and health officer during the performance of ground intrusive operations. A calibrated photoionization or flame ionization detector will be utilized to monitor the sampling locations and breathing zones for volatile organic compounds that may be present that would necessitate upgrading of protection level. Benzene detector tubes will be used to monitor for benzene if volatile organic compounds are present on a continuous basis at 1 parts per million or greater. Table 4-2 contains the air monitoring frequency and location for site monitoring at the work sites.

***Unexploded Ordnance.*** In areas where UXO is suspected to exist, the UXO specialists will perform the following UXO avoidance operations:

- X ***Area UXO Surveys Using Magnetometers.*** During this operation UXO on the surface will be detected and marked for avoidance during field operations. Metal objects just below the surface (within 2 feet) will also be marked to indicate the potential hazard.

- X ***Downhole UXO Surveys.*** UXO specialists will perform downhole magnetometer surveys to detect metal objects in the path of the boring apparatus until undisturbed soils are reached. The boring location will be moved if subsurface metal objects are detected.

If UXO is encountered, personnel will contact the site manager and UXO specialist immediately. Personnel will evacuate the immediate area and secure it.

## *5.0 Activity Hazard Analysis*

The attached activity hazard analysis (Table 5-1) is provided for the following activities:

- X Setup of equipment and general field activities
- X Land survey and UXO surveys
- X Soil and water sampling
- X Installation of monitoring wells.

The activity hazard analyses will be checked by the site manager and any changes that are necessary will be communicated to the work crew. All injuries and illnesses must be immediately reported to the site manager or the site safety and health officer, who will then notify off-site personnel and organizations as necessary.

If hospital care must be provided, the victim shall be treated at Northeast Regional Medical Center. Directions to the hospital are provided in Figure 5-1.

# ATTACHMENT 1

# PELHAM RANGE EMERGENCY ROUTE AND RANGE CONTROL CONTACT